



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,079	11/13/2003	Mark Eifert	81076427	7930
22844	7590	12/12/2005	EXAMINER	
FORD GLOBAL TECHNOLOGIES, LLC. SUITE 600 - PARKLANE TOWERS EAST ONE PARKLANE BLVD. DEARBORN, MI 48126			PIGGUSH, AARON C	
			ART UNIT	PAPER NUMBER
			2838	

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/712,079

Applicant(s)

EIFERT ET AL.

Examiner

Aaron Piggush

Art Unit

2838

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 13 November 2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 2838

## DETAILED ACTION

### *Information Disclosure Statement*

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper."

In this case, U.S. patent number 6,091,228, which is listed on page 2, line 3 of this application, has been cited by the examiner on form PTO-892, and therefore, has been considered.

### *Drawings*

2. The drawings are objected to because they mainly consist of block diagrams with no detail. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

Art Unit: 2838

be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

3. The abstract of the disclosure is objected to because it contains the title of the invention. The heading of the abstract should only read "Abstract" or "Abstract of the Disclosure". Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamaguchi (US 6,480,767).

With respect to claims 1 and 7, Yamaguchi discloses a method and controller for controlling the electrical battery power which is supplied to or drawn from the battery of a motor vehicle and is coupled to the power supply system of the motor vehicle (no. 5, 6, 2, and 3 in Fig. 1 and no. 6 in Fig. 2), the total electrical power consumed by the motor vehicle being generated by a generator which is coupled to the internal combustion engine of the motor vehicle (no. 2 and 1 in Fig. 1), characterized in that

a cost function is calculated which represents a measure of the additional fuel consumption based on the total electrical power generated by this additional consumption (col 1 ln 64 to col 2 ln 14 and Fig. 30-34), and in that an optimal value for the battery

Art Unit: 2838

power is determined such that the cost function is minimized (col 2 ln 8-14 and col 21 ln 8 to col 22 ln 7).

With respect to claim 2, Yamaguchi discloses the method as claimed in claim 1, characterized in that

the battery charging losses are taken into account when determining the optimal value (col 22 ln 20-27 and Fig. 32).

With respect to claim 3, Yamaguchi discloses the method as claimed in claim 2, characterized in that

the battery charging losses are determined by continually averaging the measured efficiency of the battery charging and battery discharging (col 6 ln 10-32 and col 22 ln 65 to col 23 ln 3).

With respect to claim 4, Yamaguchi discloses the method as claimed in claim 1, characterized in that

the set battery power is greater than or less than the calculated optimal value in order to keep the state of charge of the battery within a predetermined value range (col 15 ln 52 to col 16 ln 3, Fig. 20, 23, and 25, and col 24 ln 50-61).

With respect to claim 5, Yamaguchi discloses the method as claimed in claim 1, characterized in that

regenerative braking of the motor vehicle is carried out in which the braking energy is converted at least partially to electrical energy (col 7 ln 55-58 and col 32 ln 33-40).

Art Unit: 2838

With respect to claim 6, Yamaguchi discloses the method as claimed in claim 5, characterized in that

the regenerative braking is carried out in a gear which maximizes the generated electrical energy (col 30 ln 59-67, col 36 ln 10-12, and no. 104 in Fig. 46).

Additionally, the gear in the vehicle of Yamaguchi would maximize the generated electrical energy in order to prevent a waste of energy and to maximize efficiency of the system.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Brigham (US 5,820,172) discloses a method for controlling energy flow in a hybrid electric vehicle in which the motive demand power is supplied and the charge of the energy storage system is maintained.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Piggush whose telephone number is 571-272-5978. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



KARL D. EASTHOM  
PRIMARY EXAMINER

Art Unit: 2838

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AP